

Page 107, line 1. please delete the Sequence Listing of record and insert therefor the attached substitute Sequence Listing, and renumber the pages thereafter accordingly.

IN THE CLAIMS:

Please cancel claims 1-5 and 13-40 without prejudice.

6. (Amended) [A] An isolated nucleic acid molecule encoding a protein which comprises a SOCS box, (according to any one of claims 1-5) wherein [the] said SOCS box comprises the amino acid sequence:

$X_1X_2X_3X_4X_5X_6X_7X_8X_9X_{10}X_{11}X_{12}X_{13}X_{14}X_{15}X_{16}[X_n]X_{17}X_{18}X_{19}X_{20}$

$X_{21}X_{22}X_{23}[X_j]_nX_{24}X_{25}X_{26}X_{27}X_{28}$  (SEQ ID NO: 51)

wherein:  $X_1$  is L, I, V, M, A or P;

$X_2$  is any amino acid residue;

$X_3$  is P, T or S;

$X_4$  is L, I, V, M, A or P;

$X_5$  is any amino acid;

$X_6$  is any amino acid;

$X_7$  is L, I, V, M, A, F, Y or W;

$X_8$  is C, T or S;

$X_9$  is R, K or H;

$X_{10}$  is any amino acid;

$X_{11}$  is any amino acid;

$X_{12}$  is L, I, V, M, A or P;

$X_{13}$  is any amino acid;

$X_{14}$  is any amino acid;

$X_{15}$  is any amino acid;

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$X_{16}$  is L, I, V, M, A, P, G, C, T or S;  
 $[X_i]_n$  is a sequence of n amino acids wherein  
n is from 1 to 50 amino acids and wherein the  
sequence  $X_i$  may comprise the same or  
different amino acids selected from any amino  
acid residue;

$X_{17}$  is L, I, V, M, A or P;

$X_{18}$  is any amino acid;

$X_{19}$  is any amino acid;

$X_{20}$  is L, I, V, M, A or P;

$X_{21}$  is P;

$X_{22}$  is L, I, V, M, A, P or G;

$X_{23}$  is P or N;

$[X_j]_n$  is a sequence of n amino acids wherein  
n is from [1] 0 to 50 amino acids and wherein  
the sequence  $X_j$  may comprise the same or  
different amino acids selected from any amino  
acid residue;

$X_{24}$  is L, I, V, M, A or P;

$X_{25}$  is any amino acid;

$X_{26}$  is any amino acid;

$X_{27}$  is Y or F; and

$X_{28}$  is L, I, V, M, A or P;

with the proviso that said protein is not CIS.

7. (Amended) [A] The isolated nucleic acid molecule according to claim 6 or 41, wherein [the] said protein modulates signal transduction.

8. (Amended) [A] The isolated nucleic acid molecule according to claim 7 wherein the signal transduction is modulated by an effector molecule selected from a cytokine, [or] a hormone, a microbe or a microbial product, a parasite, or an antigen [or other effector molecule].

9. (Amended) [A] The isolated nucleic acid molecule according to claim 8 wherein [the] said protein modulates cytokine-mediated signal transduction.

10. (Amended) [A] The isolated nucleic acid molecule according to claim 9 wherein the signal transduction is mediated by [one or more] at least one of the cytokines EPO, TPO, G-CSF, GM-CSF, IL-3, IL-2, IL-4, IL-7, IL-13, IL-6, LIF, IL-12, IFN $\gamma$ , TNF $\alpha$ , IL-1 [and/or] or M-CSF.

11. (Amended) [A] The isolated nucleic acid molecule according to claim [10] 2 wherein the signal transduction is mediated by [one or more] at least one of IL-6, LIF, OSM, IFN $\gamma$  [and/or] or thrombopoietin.

12. (Amended) [A] The isolated nucleic acid molecule according to claim 11 wherein the signal transduction is mediated by IL-6.

Please add the following claims:

41. An isolated nucleic acid molecule encoding a protein which comprises a SOCS box, wherein said SOCS box comprises the amino acid sequence:

$X_1X_2X_3X_4X_5X_6X_7X_8X_9X_{10}X_{11}X_{12}X_{13}X_{14}X_{15}X_{16}[X_i]_nX_{17}X_{18}X_{19}X_{20}$

$X_{21}X_{22}X_{23}[X_j]_mX_{24}X_{25}X_{26}X_{27}X_{28}$  (SEQ ID NO: 51)

wherein:  $X_1$  is L, I, V, M or P;

$X_2$  is any amino acid residue;

$X_3$  is P, T or S;

$X_4$  is L, I, V, M, A or P;

$X_5$  is any amino acid;

$X_6$  is any amino acid;

$X_7$  is L, I, V, M, A, F, Y or W;

$X_8$  is C, T or S;

$X_9$  is R, K or H;

$X_{10}$  is any amino acid;

$X_{11}$  is any amino acid;

$X_{12}$  is L, I, V, M, A or P;

$X_{13}$  is any amino acid;

$X_{14}$  is any amino acid;

$X_{15}$  is any amino acid;

$X_{16}$  is L, I, V, M, A, P, G, C, T or S;

$[X_i]_n$  is a sequence of n amino acids wherein n is from 1 to 50 amino acids and wherein the sequence  $X_i$  may comprise the same or

different amino acids selected from any amino acid residue;

X<sub>17</sub> is L, I, V, M, A or P;

X<sub>18</sub> is any amino acid;

X<sub>19</sub> is any amino acid;

X<sub>20</sub> is L, I, V, M, A or P;

X<sub>21</sub> is P;

X<sub>22</sub> is L, I, V, M, A, P or G;

X<sub>23</sub> is P or N;

[X<sub>j</sub>]<sub>n</sub> is a sequence of n amino acids wherein n is from 0 to 50 amino acids and wherein the sequence X<sub>j</sub> may comprise the same or different amino acids selected from any amino acid residue;

X<sub>24</sub> is L, I, V, M, A or P;

X<sub>25</sub> is any amino acid;

X<sub>26</sub> is any amino acid;

X<sub>27</sub> is Y or F; and

X<sub>28</sub> is L, I, V, M, A or P.

42. The isolated nucleic acid molecule of claim 6 or 41, wherein said SOCS box comprises a sequence selected from any one of SEQ ID NOs: 52-68.

43. The isolated nucleic acid molecule of claim 6 or 41, wherein said SOCS box comprises a sequence having at least about 70% similarity to any one of SEQ ID NOs: 52-68.

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44. The isolated nucleic acid molecule according to any one of claims 6 or 41, wherein said protein further comprises a domain in a region N-terminal of said SOCS box, wherein said domain is an SH2 domain, a domain comprising WD-40 repeats, or a domain comprising ankyrin repeats.

45. An isolated nucleic acid molecule encoding a protein comprising an amino acid sequence having at least about 50% similarity to any one of SEQ ID NOS: 4, 6, 8, 10, 12, 14, 18, 21, 25, 29, 36, 41, 44, 46 or 48.

46. The isolated nucleic acid molecule of claim 45, wherein said protein comprises an amino acid sequence selected from SEQ ID NOS: 4, 6, 8, 10, 12, 14, 18, 21, 25, 29, 36, 41, 44, 46 or 48.

47. An isolated nucleic acid molecule having at least about 50% similarity to any one of SEQ ID NOS: 3, 5, 7, 9, 11, 13, 15, 16, 17, 20, 22-24, 26-28, 30-35, 37-40, 42-43, 45 or 47.

48. An isolated nucleic acid molecule which hybridizes under low stringency conditions to any one of SEQ ID NOS: 3, 5, 7, 9, 11, 13, 15, 16, 17, 20, 22-24, 26-28, 30-35, 37-40, 42-43, 45 or 47, wherein said low stringency conditions comprise at least about 1% v/v to at least about 15% v/v formamide at least about 1M to about 2M salt for hybridization at 42°C, and at least about 1M to about 2M salt for washing.

49. The isolated nucleic acid molecule of claim 47 or 48, wherein said nucleic acid molecule comprises a sequence